

U.S. Patent Application No. 09/945,354
Request for Reconsideration dated November 28, 2005
Response to Office Action of August 30, 2005

REMARKS/ARGUMENTS

Reconsideration and continued examination of the above-identified application are respectfully requested.

Rejection of claims 1 - 10, 16, and 21 under 35 U.S.C. §102(b) over Funkenbusch et al.

At page 2 of the Office Action, claims 1 - 10, 16, and 21 were rejected under 35 U.S.C. §102(b) over Funkenbusch et al. (U.S. Patent No. 5,182,016). The Examiner alleged that Funkenbusch et al. discloses a chromatography column having carbon-clad metal oxide particles with an organic group or polymer coated thereon. The Examiner further alleged that a dictionary defines "attached" as meaning "to make fast or adhere" and therefore alleges that a polymer coating that adheres to a particle is an attached organic group. For the following reasons, this rejection is respectfully traversed.

The claimed invention relates to a chromatography column having a stationary phase and a mobile phase, wherein the stationary phase is formed of carbon-clad metal oxide particles having attached at least one organic group. Funkenbusch et al. describes a completely different invention. As noted in the abstract, Funkenbusch et al. describes polymer-coated carbon-clad inorganic oxide particles and does not teach or suggest particles having an attached organic group. It is important for the Examiner to recognize that particles having attached at least one organic group are clearly recognized in the art as being different from particles that are coated with a polymer and that a polymer-coated particle would not be considered in the art to be a particle having an attached organic group, regardless of how a general purpose dictionary may broadly define the term "attached." As an example of the meaning of "attached" to persons in this particular art, the specification describes methods of attachment of organic groups in great detail on pages 10 - 16,

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and the specification at page 10, line 26 to page 11, line 9 refers to numerous patents and publications that describe examples of the attachment of organic groups to particles. Based on the combined teachings of the present specification and cited patents and publications, a person skilled in the art would clearly understand that a particle having an attached organic group is distinctly different from a particle having a polymer coating.

As mentioned above, Funkenbusch et al. does not show any sort of attachment between the polymeric coating and the carbon cladding. The text set forth at column 18, line 25 to column 19, line 45 of Funkenbusch et al. describes that the polymers are merely coated or encapsulated onto the carbon-clad inorganic oxide particles. There is no description in Funkenbusch et al. of attached organic groups, as this term is understood in the art. Rather, in Funkenbusch et al., the polymeric coating is only a coating. Therefore, Funkenbusch et al. does not teach or suggest the claimed invention and this rejection should be withdrawn.

Rejection of claims 17 - 20 and 22 - 83 under 35 U.S.C. §103(a) over Funkenbusch et al. in view of Belmont

At page 3 of the Office Action, claims 17 - 20 and 22 - 83 were rejected under 35 U.S.C. §103(a) over Funkenbusch et al. in view of Belmont (U.S. Patent No. 5,554,739). The Examiner acknowledged that Funkenbusch et al. does not disclose the particulars of the organic compound or the attachment of a second organic group to a carbon particle. The Examiner cited Belmont as allegedly teaching a variety of organic groups attached to carbon and as teaching that the carbon product having the attached organic groups can be used in the same applications as untreated carbon material, with the organic groups modifying the properties of the carbon. The Examiner took the position that it would have been obvious to attach organic groups to the carbon particles of

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Funkenbusch et al. in order to control the properties of the carbon particle, as allegedly taught by Belmont. For the following reasons, this rejection is respectfully traversed.

As discussed above, Funkenbusch et al. does not teach or suggest a chromatography column having a stationary phase and a mobile phase, wherein the stationary phase is formed of carbon-clad metal oxide particles having attached at least one organic group. In particular, Funkenbusch et al. contains no teaching or suggestion whatsoever of carbon-clad metal oxide particles having attached at least one organic group. As discussed above, a polymer coating is not an attached organic group. Belmont only describes a modified carbon product with attached organic groups, but does not specifically teach attaching organic groups to a carbon-clad metal oxide particle. Moreover, Belmont does not teach or suggest attaching an organic group to a polymer coating, which is what makes up the entire outside of the particles of Funkenbusch et al. Moreover, Belmont does not teach or suggest a chromatography column comprising a column having a stationary phase and a mobile phase, wherein the stationary phase comprises carbonaceous material having attached at least one organic group. Further, Belmont and Funkenbusch et al. are directed to completely unrelated inventions, and as such, are non-analogous art such that one skilled in the art would not be motivated to combine the two references. With respect to the different organic groups of the dependent claims, these relate to complex groups and that the Examiner has not shown how it would be obvious to attach these groups to a polymer coating of Funkenbusch et al. and provide a successful chromatography column. Therefore, this rejection should be withdrawn.

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Provisional rejection of claims 1 - 10 and 16 - 83 under the judicially created doctrine of obviousness-type double patenting over claims 1 - 10 and 16 - 49 of U.S. Patent Application No. 09/654,182

At page 3 of the Office Action, claims 1 - 10 and 16 - 83 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1 - 10 and 16 - 49 of U.S. Patent Application No. 09/654,182. The Examiner alleged that the prior application fully encompasses the claims of the present invention, except that it fails to disclose carbon-clad metal oxide particles. The Examiner alleged that Funkenbusch et al. shows the use of carbon clad metal oxide particles with attached polymeric materials. The Examiner took the position that it would have been obvious to modify the claims of the prior application with the teachings of Funkenbusch et al., on the alleged grounds that Funkenbusch et al. teaches that carbon-clad metal oxide particles can be used as the separation materials in a chromatography apparatus. For the following reasons, this rejection is respectfully traversed.

Applicants note that the present rejection is a provisional rejection only, and therefore, the Applicants are not required to provide a response unless and until Application No. 09/654,182 is allowed with the claims indicated by the Examiner before the present application is in condition for allowance. Applicants further note that although U.S. Patent Application No. 09/654,182 has previously received a Notice of Allowance, the application is still in prosecution by reason of a Request for Continued Examination filed on August 30, 2005. Therefore, the Applicants elect to postpone addressing the merits of the present provisional rejection on the grounds that the rejection is premature.

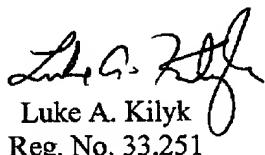
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CONCLUSION

In view of the foregoing remarks, Applicants respectfully request the reconsideration of this application and the timely allowance of the pending claims.

If there are any fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,



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